Out of sight burrowing owls hole up at Site 300

LLNL's wild side

By Jim Woolett

The western burrowing owl is a species adapted to grassland ecosystems. Grassland animals share characteristics that are uniquely derived from their habitat and differ from animals found in other habitats, like chaparral or forest environments. These characteristics help them survive the localized conditions of open plains and restricted resources.

One of the more noticeable and common traits of grassland fauna is the abundance of burrowing species. Ground squirrels and deer mice are well known fossorial animals, but many reptiles, some amphibians and even a bird — the burrowing owl — spend time underground in rodent burrows as well.

Burrowing owls prefer to live underground for several reasons. Typical grassland ecosystems provide little cover or places to hide from predators. Secondly, climatic variation may oscillate widely and underground life offers more constant and safer temperatures throughout the year. Lastly, a burrow represents a safe place or refuge from grassland fires that typically pass over burrows quickly and with lower temperatures than the woodland forest fires.

Burrowing owls presently live at Site 300, and as recently as 1997, have been seen nesting at the Livermore main site within the north buffer zone. The owl is about nine inches tall and is quite active in the daytime, contrary to other owl species. It hunts a variety of food sources, but usually relies upon mice during the winter and large-bodied insects (like the Jerusalem cricket) in the summer to forage upon.

It occupies burrows previously excavated and abandoned by ground squirrels or badgers. These burrows are generally between three to six meters in length and end in an antechamber that serves as the nesting area for young. A productive nest may have five to eight owl nestlings visible in June at the burrow entrance. Much is known about the owl from studies performed during the breeding cycle when the birds are quite visible. But much less is known about its winter habits and localized or long distance migrations that may occur into and from this area of California.

Besides the dry, open grassland habitats, burrowing owls may be seen close to human habitations such as golf courses, airports, vacant lots in residential areas, right-of-ways and any place potential subterranean burrows are present. These flatland areas in the central valley and bay areas are also prime building locations and are rapidly becoming areas developed for human use.

The bird is now found only in a fraction of its historical range in California. At LLNL it receives protection through measures designed to safeguard active burrows of the local owl population. In the next decade, LLNL burrowing owls may be one of the few among the remaining populations in this region.

Left, a rodent burrow serves as home to the western burrowing owl. Above, a family of western burrowing owls peek out from their nest. Right, an adult steps out its burrow.

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